

# **RP154x Series**

## Low Voltage Dual 300mA LDO

The RP154x Series are CMOS-based dual output LDO regulators featuring 300mA output. RP154x features a supply current from 50μA per output, a minimum input voltage from 1.4V and the output voltage can be set from 0.8V to 3.6V (in 0.1V steps). RP154x is available in SOT-23-6 and DFN1216-8 packages. Due to the low minimum input voltage RP154x is able to extend battery life, additionally the LDO has less power dissipation by the low dropout voltage between input and output.

#### **FEATURES**

- Supply Current (Iss) ......Typ. 50μA × 2 (V<sub>IN</sub>=SET V<sub>OUT</sub>+1.0V)
- Standby Current (I<sub>standby</sub>) ·····················Typ. 0.1μA × 2 (Same as above, CÉ1/CE2="L")
- Dropout Voltage (VDIF) ······Typ. 0.25V (IouT=300mA, VouT=2.8V)
- Ripple Rejection (RR)······Typ. 70dB (f=1kHz)
- Input Voltage Range (V<sub>IN</sub>)·············1.4V to 5.25V
- Output Voltage Range (Vout)········· 0.8V to 3.6V\* (internally fixed)
- Output Voltage Accuracy ----- ± 1%

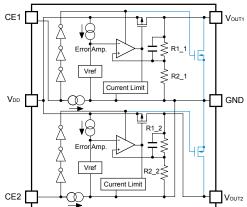
- Temp. coeff. of Output Voltage ······Typ. ± 80ppm/°C
- Line Regulation Typ. 0.02%/V
- Fold-back Protection Circuit ......Current limit Typ. 60mA
- Auto-Discharge function ······ B Version
- Packages -------DFN1216-8, SOT-23-6
- Ceramic Capacitor can be used. ···· 1μF or more

\*) For information about combination of output voltage, visit our website to check. (The above shows specification at Topt=25°C. Design assurance value at -40°C ≤ Topt ≤ 85°C is also available. For details, please refer to the datasheet.)

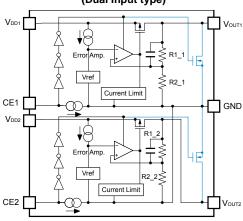
#### **BLOCK DIAGRAMS**

### RP154NxxxB

(Single Input type)



## RP154LxxxB (Dual Input type)



\*) xxxA Version does not exist above blue line.

#### **SELECTION GUIDES**

Halogen Free	Package	Q'ty per Reel	Part No.
H/F	DFN1216-8	5,000 pcs	RP154Lxxx* -E2
H/E	SOT-23-6	3.000 pcs	RP154Nxxx* -TR-FE

#### **PACKAGES**

DFN1216-8					SOT-23-6				
	Top View Bottom View 8 7 6 5 5 6 7 8					6 5 4			
	1	2 3 4	4 3	2 1			2 3		
-	1	GND*1	5	CE2		1	CE1		
	2	Vout1	6	V <sub>DD2</sub>		2	V <sub>DD</sub>		
	3	Vout2	7	V <sub>DD1</sub>		3	CE2		
	4	GND*1	8	CE1		4	Vout2		
*) The tab is substrate level (GND).					5	GND			
*1) The GND pin must be wired together					6	V <sub>OUT1</sub>			

- xxx: Specify a combination of output voltage for each output using serial numbers.
  - Select from (A) without auto-discharge function or (B) with auto-discharge function.

#### **TYPICAL CHARACTERISTIC**

# RP154x (VR1/VR2) Dropout Voltage vs. Output Current

# 300 VOUT=2.5V 85°C 25°C 25°C 25°C 100 150 200 250 300 Output Current lout(mA)

#### **APPLICATIONS**

when it is mounted on board.

- Power source for hand-held communication equipment, cameras, and VCRs
- Power source for home appliances

Power source for battery-powered equipment

No.EK-202-101001 CMOS LDO Regulator



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■Ricoh awarded ISO 14001 certification.

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Ricoh completed the organization of the Lead-free production for all of our products. After Apr. 1, 2006, we will ship out the lead free products only. Thus, all products that will be shipped from now on comply with RoHS Directive.